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## Form of Discourse and Sentence Structure

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**A**S LANGUAGE work is conducted in the grades today, frequently children are called upon to describe what they have done or are doing, to narrate their experiences, to explain procedure, or to argue a point—all with a considerable degree of freedom. In other words, pupils are asked, under varying circumstances, to use each of the four recognized forms of discourse. A question which rarely has been asked is, what effect is exerted by the form of discourse used? It seems to be assumed by many teachers that certain results are secured by having children write, regardless of the form of discourse employed in that writing.

That this assumption is not justified was manifested clearly in the course of a recent investigation<sup>1</sup> which attempted to determine some factors which bear upon the complexity of sentence structure in the written composition of children in grades one to six. In such a study it was obviously necessary to answer the question as to whether the form of discourse used had any bearing upon the situation, for if it did have such a bearing an element was introduced which needed to be controlled.

\*Member of The National Conference on Research in Elementary School English.  
1 Seegers, J. C.—*A Study of Certain Elements in the Complexity of Sentence Structure*. Public School Publishing Company. Forthcoming.

In order to determine the facts, several of the schools participating in the research were asked to have a number of children write papers in the several forms of discourse. The conditions under which these papers were written were controlled<sup>2</sup> so that the form of discourse was the only variable.

Analyses of these papers with reference to the relative use of dependent clauses, which was the principal element of complexity under consideration, presented interesting and pertinent information concerning the question raised. This paper confines itself to the single factor of complexity, for reasons of space. The original study is more discursive and comprehensive, although there are many elements of complexity not treated therein, for the same reason.

In presenting an analysis of such papers a primary requisite is the determination of an invariable unit on the basis of which comparisons can be made and relationships computed. Most previous studies of frequencies of parts of speech or elements of sentences use the sentence as the basis of computation. For example, it may be stated that there are so many verbs per sentence, so many adjective clauses per sentence, and so on. It is the contention of 2 Readers desirous of ascertaining the control methods mentioned in this paper are referred to the study cited.

this study that this basis results in an entirely false conception or picture of the papers analyzed when those papers are written by children in the grades.

The sentence is an artificial or conventional device.<sup>3</sup> It is indicated, in writing, by means of punctuation marks, the correct use of which is acquired by teaching and practice. Children in grades one to six have, in many instances, acquired very little skill in the use of punctuation marks. The result is that any attempt to state the frequency with which any element occurs by comparing that frequency with the number of sentences as actually punctuated in the same material will not present an accurate picture. For example, let us suppose that a fourth grade child has punctuated 200 words as one sentence, and that in this material there are four time clauses and four independent clauses. Let us suppose further that a second child has punctuated 100 words as four sentences, and used eight time clauses and four independent clauses. A time-clause per sentence comparison would make it appear that the first child used time clauses twice as frequently as the second, while as a matter of fact the opposite is true. There is probably no single measure or basis of estimate which is entirely free from error, but obviously the sentence, as punctuated by children, is not adequate.

A better basis is afforded by comparing the number of dependent clauses with the number of independent clauses. This ratio is not affected by punctuation, and is indicative of the relative use of types of clauses employed in the compositions analyzed. Taking the hypothetical examples cited, such a basis would afford a true comparison of the use of the dependent clauses.

This basis, or unit, is employed in the analyses following, which show how frequently, comparatively, dependent clauses were used when children wrote in the several forms of discourse. The papers analyzed were secured as follows:

One of the school systems which had 3 cf Meader, C. L. and Pillsbury, W. B.; *The Psychology of Language*. D. Appleton, N. Y. 1928. pp.254 ff and Aurner, R. R.: "The History of Certain Aspects of the English Sentence." *Philological Quarterly* II. July 1923, pp. 187-208.

agreed to participate was requested to supply, under specified conditions, from two sections each of grades four, five, and six, papers representative of argumentation, of exposition, and of narration and description. The last two were combined because observation on the part of both the writer and others who were consulted had indicated that children tend to merge those two forms when they write.<sup>4</sup> This request elicited papers as follows:

Type of Discourse	Grade: 4	5	6	Total
Argumentation	63	77	29	169
Exposition	67	86	63	216
Narration and Description	70	90	59	219
<b>Totals</b>	<b>200</b>	<b>253</b>	<b>151</b>	<b>604</b>

As was stated previously, the analysis necessitated a device for stating comparisons objectively and numerically. Instead of using the sentence as the basic unit, as most previous studies have used it, the independent clause was made the unit.

The independent clause provides a unit more expressive of the language of a paper than does the sentence; it does not depend upon punctuation, but upon expression of thought. In order to secure a simple form of numerical statement, the ratios between the other elements and independent clauses were selected. They are expressed by stating the frequency of occurrences of the element in question as a percentage of the number of independent clauses found in the same papers. For example, if a group of papers contained 100 independent clauses and 6 time clauses, the time clause ratio would be 6, indicating that the number of time clauses is 6 per cent of the number of independent clauses. This ratio is invariable, and entirely independent of vagaries of punctuation.

Such a ratio was computed, in the analysis of the papers in this preliminary study, for the following elements: substantive clauses used in indirect discourse, as subjects, as objects, predicate complements, appositives; time clauses; conditional clauses; clauses of manner, cause, degree, result, concession, place, purpose; adjective clauses. This is, quite obviously, a very detailed analysis of the uses of de-

One of the school systems which had 3 of Meader, C. L. and Pillsbury, W. B.; *The Psychology of Language*. D. Appleton, N. Y. 1928. pp.254 ff and Aurner, R. R.: "The History of Certain Aspects of the English Sentence." *Philological Quarterly* II. July 1923. pp. 187-208.

pendent clauses. That it would be cumbersome because of this detail was anticipated. However, it had to be undertaken, for there was no precedent to follow; and to discard any of the types of clause would be unsafe. One purpose of this preliminary study was to determine the course to be followed in the analyses, and complete treatment of these papers was essential.

When the results were tabulated it was found that certain types of clause were used so infrequently that separate consideration of them was purposeless. This is

the reason that in Tables I and II, which display a summary of this tabulation, lines 3 and 8 refer to clauses of various types and of miscellaneous nature, while the other lines are devoted each to one kind of clause. As an example of the infrequency of some kinds of clauses let it be cited that in all of the 604 papers the substantive clause was used as the subject of a verb only twice and in apposition only five times.

In Table I the actual frequencies of the types of dependent clauses indicated by the descriptions are found.

TABLE I  
Frequencies of Certain Types of Dependent Clauses Distributed by Grades  
and by Forms of Discourse

Forms of Discourse Grades	Argumentation			Exposition			Narration and Description		
	4	5	6	4	5	6	4	5	6
<b>Types of Dependent Clauses</b>									
Substantive used in indirect discourse	79	148	22	32	15	10	83	22	48
Other Substantive Clauses	4	25	18	4	19	16	3	22	49
Conditional Clauses	43	73	43	39	62	51	9	12	13
Clauses of Manner	1	5	2	3	5	11	4	3	14
Cause Clauses	41	44	17	1	8	1	8	13	11
Adjective Clauses	14	25	12	42	63	78	28	45	70
Time Clauses	27	32	23	44	86	74	64	72	101
Miscellaneous Clauses	4	18	6	7	8	22	4	17	33

The first line reads: In the papers illustrating argumentation, 4th grade children used 79 substantive clauses in indirect discourse, 5th grade children 148, etc.

TABLE II  
Ratios of the Dependent Clauses Listed in Table I and Independent  
Clauses Found in the Same Papers

Forms of Discourse Grades	Argumentation			Exposition			Narration and Description		
	4	5	6	4	5	6	4	5	6
<b>Types of Dependent Clauses</b>									
Substantive used in indirect discourse	33	46	16	16	2	2	11	3	6
Other Substantive Clauses	2	8	14	1	3	3	1	3	6
Conditional Clauses	16	24	30	7	9	8	1	2	2
Clauses of Manner	1	2	2	1	1	2	1	1	2
Clauses of Cause	16	15	13	1	1	1	1	2	1
Adjective Clauses	6	8	9	8	9	12	3	6	8
Time Clauses	11	11	16	8	13	11	9	10	12
Miscellaneous Clauses	2	6	5	1	1	3	1	2	4

The first line reads: In the 4th grade papers which illustrated argumentation, the ratio existing between substantive clauses used in indirect discourse and independent clauses found in the same papers was that of 33 to 100, etc.

Table II shows the ratios, per hundred independent clauses, existing between the dependent clauses tabulated in Table I and the independent clauses in the same papers. Table II is more easily interpreted than Table I because it converts the raw frequencies of Table I into ratios. However, the two tables should be read together, for a ratio representing only low frequency is not significant, while the frequencies alone may be misleading.

Taking the two tables together, one can discern several distinct tendencies. Under argumentation one can see a marked tendency toward increased use of substantive clauses in indirect discourse, of clauses of condition, and of clauses of cause. Under exposition there is a slightly noticeable tendency toward increased use of adjective clauses. In narration and description there seems to be no tendency to multiply the uses of any one type of clause, and writing in the form of exposition seems to affect only adjective clauses, and those not markedly.

No kind of dependent clause was used frequently in narration and description except time, adjective, and substantive clauses used in indirect discourse. This is true of exposition also, except that conditional clauses were used in rather high ratio in the papers illustrating that form of discourse. The various types of clauses listed under miscellaneous, and the total frequencies of each, were as follows: concession 4; purpose 7; degree 32; result 59; place 20. The result clauses, the most numerous of the group, were distributed: argumentation 12; exposition 28; narration and description 25. The clauses listed under degree were distributed: argumentation 9; exposition 10; narration and description 15.

It is indicated that the form of discourse in which children write has a definite bearing upon their sentence structure; writing in the form of argumentation tends particularly to multiply the use of dependent clauses. This is further demonstrated by the instances found in these papers of subordination, or modification of one dependent clause by another dependent clause. They were distributed: argumentation 69; exposition 37; narration and description 41. The argumentation preponderance was built up largely by chains of clauses of cause. Writing exposition seems in these papers to result in the use of more dependent clauses than writing narration and description, but fewer dependent clauses than does writing argumentation. Under narration and description there is no manifest multiplication of the use of any particular type of dependent clause. This is quite apparent when this form is compared with the other forms of discourse in Tables I and II.

To summarize, the analysis points out that one conducting a study of written composition must consider the form of discourse in which that composition is written, as should the teacher who is grading a paper or assigning work. It suggests clearly that writing in the form of narration and description is less likely to multiply the uses of any specific types of dependent clause than is writing in the other two forms, and consequently points toward the advisability of using for comparative purposes papers written in that form.

These results were all substantiated by further and more complete analyses involving hundreds of papers from schools of various types in several states.

# Practice Materials in Third Grade English

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THE MOST important outcome of English is the development of good English habits. Generally teachers have had difficulty in developing habits which will carry over into the pupil's writing. The problem of this study was to experiment with materials and methods in an effort to arrive at a plan which would cause the knowledge of correct English to be carried over into written work.

The first step in planning the experiment was to draw up a definite statement of a few of the objectives of third grade language. This was done after consulting the leading courses of study and a number of third grade teachers. The objectives used in this experiment dealt largely with the use of capital letters, the period, and the question mark, and with the writing of contractions. The following ten objectives were used as a basis for providing the content of the language material to be used.

1. Begin each word in the name of a person with a capital letter.

2. Use capital letters in writing the initials of a person's name. Place a period after each initial or other abbreviation, such as *Mr.* and *Mrs.*

3. Begin the title of respect before a person's name with a capital letter.

4. Begin the names of streets, including the word *avenue* or *street*, with capital letters. Write correctly the abbreviations *Ave.*, *St.*, *N.*, *S.*, *E.*, and *W.*

5. Begin the first word in every sentence with a capital letter.

6. Use a period after every *telling* sentence and a question mark after every *question*.

7. Begin the names of the days of the week with capital letters.

8. Begin the names of the months with capital letters.

9. Indent the first line of each paragraph one-half inch. Keep the left-hand margin

straight. Fill each line but do not crowd the writing at the end of the line. Leave a wider space between sentences than between words in the sentences. Have all sentences in a paragraph tell something about the same thing.

10. In contractions always write an apostrophe to show where a letter is left out. Write the contractions as one word.

The second step was to prepare one or more pages of explanatory material and practice exercises for each of these objectives. The explanatory material illustrated the use of a particular requirement for good English and gave the pupil the reason why the practice of this habit would make his written work more understandable. The practice exercises gave practice in the good English habit stated in the objective. The practice was related as closely as possible to situations in real life. As new requirements for correct English were added, the earlier requirements were reviewed. The following sample page illustrates the type of material prepared.

## USE CAPITAL LETTERS IN WRITING THE NAMES OF PERSONS

Mary Ann Smith is eight years old. She lives near Helen Martin, who is nine years old. The two girls often play together. They sometimes play with two boys who live near. The boys' names are Henry Harper and John Bennett. Henry and John are nine years old.

Notice that all the words in the names of these four children begin with capital letters. You should always begin each part of your own name with a capital letter.

A person's name belongs to him only. The capital letters show the difference between a name like *Helen Martin*, which belongs to only one person, and a word like *girl*, which may be used to speak of any child not a boy.

Always begin each word in the name of a person with a capital letter.

## EXERCISE I

Writing the Names of Persons

Write the full names of the persons called

for. Be sure to spell all the words correctly. Correct spelling shows that you are forming right English habits. Besides, to spell a person's name wrong is not very polite.

1. Write the full names of the two girls named above.

2. Write the full names of the two boys who sometimes play with Betty and Helen.

3. Write your own name.

4. Write the name of a playmate.

5. Write the names of two girls in your schoolroom.

6. Write the names of two older girls that you know.

7. Write the names of two boys in your schoolroom.

8. Write the names of two older boys that you know.

Perfect Score 30

My Score \_\_\_\_\_

These materials were tried out in a control situation. Two classes were selected of as nearly equal ability as possible. This was done on the basis of teacher judgment. The one factor which could not be controlled was a possible difference in the ability of the teachers. However, the teachers were of as nearly equal ability as could be determined subjectively.

The experimental class used the practice materials in the hands of the pupils without a textbook or other aids. The directions to the teachers were as follows:

1. Use one sheet a day and do not use any other textbook.

2. See that pupils read the explanatory material before they attempt the exercise. They should be allowed to work independently as far as possible. Do not attempt to give help except when a pupil has reached a point where he cannot make further progress.

3. The work on the sheets may be supplemented by additional practice when necessary. Use only the regular amount of time for English.

4. The finished work sheets should be checked each day. Pupils may check their own

papers as the correct answers are read by the teacher, or pupil helpers may be used in checking. Errors should be corrected. Every pupil should have a perfect paper before he leaves it.

Definite directions were given for scoring each practice unit. The perfect score was arrived at by estimating the number of times the habit would be used in the exercise. In the sample exercise above the number of times capital letters would be used varies slightly according to the number of parts in the names written. The pupil's score was the perfect score minus the number of errors and omissions. Thus it would be possible for a pupil to make a score below zero. If there had been such a score, it would have been marked zero.

The control class used textbooks and any other devices which the teacher could find for teaching the same habits as those included in the practice material. The teacher of the control class had a copy of all the explanatory and practice sheets which were in the hands of the experimental class and was asked to cover the topics outlined in these sheets. This gave her definite information as to what to teach and what habits to develop. The only restriction was that daily practice sheets were not to be placed in the hands of the pupils.

Before the experiment began, a language test covering the material of the ten objectives was given to both classes. The experiment extended over a period of twenty-two days, after which a second language test was given on the same items covered in the original test. As these were mastery tests, there was no check on their relative difficulty. However, it seems probable that they were closely similar in difficulty. The initial test is presented below.

Name \_\_\_\_\_

Finding Out How Much You Know

Perfect Score 67

My Score \_\_\_\_\_

A. In the following sentences write in the blank spaces words which will make the sentences correct.

1. The names of persons should begin with letters.

2. The \_\_\_\_\_ of streets should begin

with capital letters.

3. The abbreviation of the title of respect written before a person's name should be followed by a \_\_\_\_\_.

4. The word *street* or *avenue* when used as part of an address should begin with a \_\_\_\_\_ letter.

5. When you write the initials of a person's name, use \_\_\_\_\_ letters and place a \_\_\_\_\_ after each initial.

6. Abbreviations of titles of respect used before a person's name should begin with \_\_\_\_\_ letters.

7. The abbreviation of *street* or *avenue* when used as part of an address should begin with a capital letter and should be followed by a \_\_\_\_\_.

8. The first word of every sentence should begin with a \_\_\_\_\_ letter.

9. Every telling sentence should be followed by a \_\_\_\_\_.

10. Every question sentence should be followed by a \_\_\_\_\_.

11. Indent the \_\_\_\_\_ line of each paragraph. Keep the left-hand margin \_\_\_\_\_ . Fill each \_\_\_\_\_ line. Leave a wider space between \_\_\_\_\_ than between words. Have each sentence of a paragraph tell something about the \_\_\_\_\_ thing.

12. Begin the names of the days of the week with \_\_\_\_\_ letters.

13. The names of the \_\_\_\_\_ of the year should begin with capital letters.

14. A contraction should be written as \_\_\_\_\_ word.

15. An apostrophe is used in a contraction to show where a \_\_\_\_\_ is left out.

B. Write the following street address correctly. First write it without abbreviations; then write it, using abbreviations.

205 east hudson street

1. \_\_\_\_\_  
2. \_\_\_\_\_

C. Write the following name correctly. First write it in full; then write it, using an initial for the middle name.

mr herbert daniel williams

1. \_\_\_\_\_  
2. \_\_\_\_\_

D. Write a sentence in answer to each of the following questions.

1. How should a telling sentence end?  
2. How should a question sentence end?

3. How should the first word of every sentence begin?

E. Write a question you would ask if you wanted to know how old someone is.

F. Write a paragraph, answering the following questions.

In what month is your birthday?

How old will you be on your next birthday?

What will you do on your birthday?

G. Write the contraction for each of the following groups of words.

1. is not \_\_\_\_\_ 2. does not \_\_\_\_\_

A perfect score on this test was 67 points. Twenty-three points were on the knowledge of correct English habits, and 44 points were on the practice of these habits. The 20 points in Part A and 3 points for the correct answers to the questions in Part D were considered as knowledge of habits. The 44 points on practice were scored as follows:

B 1	Capital letters	3
B 2	Capital letters	3
	Periods	2
C 1	Capital letters	4
	Periods	1
C 2	Capital letters	4
	Periods	2
D and E	Capital letters	4
	Periods and question marks	4
F	Capital letters	4
	Periods	3
	Space between sentences	2
	Indented first line	1
	Proper margin on left	1
	Straight margin on left	1
	Full lines	2
	No crowding at end of line	1
G	Contractions	2

The results of the initial and the final tests were analyzed, and a comparison was made between the achievement of pupils in the control class and those in the experimental class. In order to make a comparison between the knowledge and practice elements in the tests, the scores were converted into percentages of perfect scores. The pupils of the two classes were paired on the basis of approximately equal scores on the initial test. The largest difference in any case was 3 points in

percentage score. The mean initial score of both classes was identical. By this pairing, the number of pupils was reduced to 18.

was 15.3 points and that of the experimental class was 27.9 points. The differences in favor of the experimental group was 12.6 points.

TABLE I  
Progress in Language Achievement in Third Grade.  
(Percentage Scores)

Pair Number	Initial Score	Control Class	Experimental Class	Difference in favor of the experimental pupil	
		Final Score	Initial Score	Final Score	Improvement
1	3	10.4	6.0	14.9	8.9 1.5
2	16.4	28.3	11.9	53.7	37.3 25.4
3	26.9	56.7	29.8	67.2	40.3 10.5
4	40.3	43.3	3	86.7	46.4 43.4
5	47.8	80.6	32.8	92.5	44.7 11.9
6	50.7	85.1	34.4	83.6	31.4 —3
7	55.2	71.6	16.4	92.5	37.3 20.9
8	59.7	88.1	28.4	91	34.3 5.9
9	59.7	88.1	28.4	77.6	19.4 —9
10	64.2	73.1	8.9	88.1	23.9 15
11	67.2	77.6	10.4	94	25.3 14.9
12	67.2	79.1	11.9	97	28.3 16.4
13	67.2	88.1	20.9	98.5	29.8 8.9
14	71.6	76.1	4.5	95.5	25.4 20.9
15	71.6	88.1	16.5	100	29.9 13.4
16	73.1	77.6	4.5	97	20.9 16.4
17	88.1	97	8.9	98.5	13.4 4.5
18	92.5	89.5	—3	97	6 9
Mean	56.8	72.1	15.3	56.8	84.7 27.9 12.6

In Table I are given the initial and final percentage scores and the improvement made by each pupil. Each line in the table represents a pair of pupils, one in the control class and one in the experimental class. The pairs are arranged in the order of size of initial scores with the low score at the top. The improvement of individual pupils in the control class ranges from -3 to 34.4 percentage points. The improvement of individual pupils in the experimental class ranges from 6 to 46.4 percentage points.

The experimental pupil of each pair made greater improvement than the control pupil in every case except that of pairs number 6 and number 9. The differences are large enough to indicate that pupils of all levels of ability make more rapid progress in English through the use of individual assignment and practice sheets than through the study of English as presented in the ordinary textbook. The average improvement of the control class

Table II shows the mean improvement in the total score, knowledge elements, and practice elements of the tests. The improvement in total score has been discussed in connection with Table I. It will be noted that in the knowledge of good English habits there was very little difference between the two classes, but in the practice of good English habits the experimental class improved 17.3 points more than the control class.

TABLE II  
Improvement in Language Ability

	Total Score	Knowledge	Practice
Control class	15.3	16.9	14.5
Experimental class	27.9	19.6	31.8
Difference in favor of experimental class	12.6	2.7	17.3

These data seem to show that the knowledge of good English habits can be taught from a textbook about as well as it can from individual assignment sheets. However, the practice of these habits in actual writing is acquired much

# Research in Elementary Language\*

## A Report on Problems and Progress

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**L**ANGUAGE was one of the earliest of the subject-matter fields to be subjected to scientific study. Nevertheless, it still remains a source of much dissatisfaction to teachers and of trouble to research workers. Perhaps it is because the basic language skills are interwoven in such an unbelievably complicated way. Possibly it is the absence of absolute standards of accuracy which makes objective measurement and controlled experiment in language exceedingly difficult. Even a most elemental analysis of the drill content of textbooks indicates that the authors of much of the instructional material in this subject are far from being in agreement as to its content or grade placement. Many seemingly elemental language skills presented for instruction in the lower grades appear to be so indifferently taught and mastered that they persist as sources of trouble even in the high school and college. There must be some real reason back of all this.

Undoubtedly some of the difficulty lies in the ramifications of the language skills themselves. Some of it lies in the fact that language is a subject which by its very nature must be kept alive and volatile. To permit it to crystallize is to destroy its effectiveness. Accordingly, standards of practice must be changing and often uncertain. It seems apparent, however, that more of the difficulty lies in the fact that in the past the attack on the problems of language as a field of elementary school instruction has been mainly *philosophical* rather than *experimental*. Grammar as a science of language has developed largely as a formal framework for the convenience of adults in their study of language rather

than as a functioning teaching procedure. Clearly what is needed is for those who are interested in the improvement of the pedagogy of language largely to discard the old formal classifications and generalizations and to begin an attack on the problems with the open-minded attitude of the research worker.

It is the purpose of this discussion to outline some aspects of a comprehensive research program in elementary English. Such a program can not be entirely new and revolutionary; nor can it be all-inclusive. In its present form this statement represents the results of the writer's observation and analysis of the major problems in the elementary English field over a period of several years. It is a composite of this experience supplemented by the suggestions of many others vitally interested in the pedagogy of the subject. Since it discusses problems for investigation and studies now under way under the writer's direction, it is obvious that it must be looked upon as the research program of a single individual with a specific and somewhat local point of view. It must be clear also that there are practical as well as theoretical limitations to such a program of investigation. Not only is there often real difficulty in recognizing and setting up a problem worthy of investigation, but there is usually greater difficulty in discovering the ways and means for administering it. The scope of the present research program and the degree to which it has been possible to get it under way is largely accounted for by the fact that the writer is fortunate in being located in an institution in which every encouragement is extended to the individual with a constructive research program in mind. Financial aid for research assistants and technical

\*Presented before the meeting of The National Conference on Research in Elementary School English, Minneapolis, February 27, 1933.

apparatus, and opportunities for contact with many interested and well-trained graduate students have combined to aid materially in carrying the program to its present state. Clearly, much remains to be accomplished before even tentative answers can be provided for many of the simplest problems in this field.

For the purpose of this discussion the research problems in the field of elementary English are grouped into five main types, namely:

I. Special research techniques peculiar to the field;

*Section I. The Development of Research Techniques*

THE development and the evaluation of tools for the collection and interpretation of educational data are among the fundamentals of scientific method. It is not far from the truth to say that the greatest contributions which have been made to the scientific method and literature of education are to be found in the appraisal and refinement of research techniques, rather than in the productive results of their application. This is particularly true in the case of English, a field in which productive results definitely await the development of adequate research techniques.

In this section of the report consideration is given to three types of research techniques which appear to open up great possibilities for definite contributions to the field of elementary school English. These three problems involve: (A) the development and evaluation of an accurate and objective method of securing verbatim records of oral language activities; (B) the development of an adequate criterion for the course of study in certain phases of the mechanics of composition which will be suitable for use as a checking-chart in the analysis of written compositions; and (C) the demonstration of the practicability and the development of methods for using the mechanical sorter and tabulator (Hollerith machines) for the analysis of language products. These projects are discussed here in the order of their appearance above.

- II. Problems underlying the philosophy of the subject itself;
- III. Problems involving the determination of the content and grade placement of the course of study;
- IV. Problems involving the experimental development and evaluation of methods of teaching;
- V. Problems involved in the evaluation of achievement in the subject.

The remaining sections of this report are organized around these five topics.

*Section I. The Development of Research Techniques*

*A. An Experimental Evaluation of a Technique for the Recording of Oral Language Activities.*

1. Curriculum workers in English for the past fifteen years have looked upon the collection of errors in written and oral composition as a fruitful source of instructional material in language. However, evidence now available makes it apparent that the significant work of such leaders as Charters, Miller, Wilson, Randolph and others must have been handicapped definitely by their inability to secure complete and verbatim records of the total oral language situations under observation. With the possible exception of the investigation by Randolph, who used stenographic records, the observers in these earlier studies had their attention focused almost wholly on the errors made by the subjects, and there is little likelihood that these records of errors were entirely correct. In fact, the accuracy of such reports has been questioned by the investigators as well as by other research workers. Lyman<sup>1</sup> points out the fact that no other type of investigation reported in his monograph is as loose, inaccurate, and unreliable as the techniques employed in the collection of errors in oral English.

The reliability of the results of recording oral language errors depends upon the

<sup>1</sup> Lyman, R. L., "Summary of Investigations Relating to Grammar, Language, and Composition." University of Chicago Press, 1929.

accuracy and extent of the record taken by the observers. In addition to the difficulty that the observer may not hear the activities accurately, there is the problem of unconscious or unintentional editing and correcting on the part of the recorder. For business purposes and other practical purposes this unintentional editing may have its advantages; for language research purposes, it is a distinct difficulty and handicap. Obviously, the record of the language activities and situations must be accurate, must be complete, and must be transcribed without any editorial juggling. Only when this is the case can language skills and usages be evaluated in terms of their true social importance.

2. The realization of the importance of this phase of the problem, and of our present helplessness in making any significant attack on the many constructive problems of the language curriculum, have united to stimulate the development of devices capable of securing objective, verbatim records of all types of language activities.

An examination of the available commercial devices at the time this work was begun led to the conclusion that it would be necessary for most of the equipment to be made. While it is true that certain commercial concerns, particularly those interested in the sound picture industry, were working on the problem, much of the material which had been developed up to that time was too expensive to secure and too cumbersome to operate for use in this work. Naturally, the dictating machine, with its portability and general economy, suggested itself for use in the preliminary experiments. Through the co-operation of engineers in the laboratories of the Dictaphone Corporation, a laboratory model of a magnetic or electric cutter for use on the Dictaphone transcribing machine was secured. This cutter is fed from a properly balanced amplifying unit. After much experimentation, suitable amplifying units and sources of power supply were developed.<sup>2</sup>

<sup>2</sup> The courteous co-operation of the Thordarson Electric Manufacturing Company of Chicago, and the Dictaphone Corporation of Bridgeport, Connecticut, is gratefully acknowledged here.

a. In its present form, the recording apparatus consists of a battery of highly sensitive condenser type microphones, a mixing panel with a one stage audio frequency amplifier, a power amplifier unit with its output feeding into the electrical recording equipment which consists of a monitor dynamic speaker, and two magnetic recorder units mounted on Dictaphone Type "B" transcribing machines. The recording equipment is permanently installed in the language laboratory. The only equipment which must be transported from school to school is the microphone unit and its power supply. In the experiments now going on, telephone circuits from the University School, bridged through the local telephone office into the laboratory room, are being used. The sound records are taken on the standard wax cylinders commonly used for dictation purposes. The simultaneous recording of the two machines at the beginning and end of each record provides an overlap which insures the continuity of the transcribed reports.

b. The results of a carefully controlled experiment<sup>3</sup> showed the accuracy of the recording machine to be 99.7%. Oral language activities amounting to 40,214 words were taken down by the electric recording machine and by groups of superior stenographers, court reporters, phoneticians, and long-hand reporters. It was found that the machine worked so accurately that on the average only three words per thousand were not sufficiently intelligible to be agreed upon by three proof readers. On the same material, for each thousand words dictated to a selected group of shorthand reporters only 643 words were taken down and 533 were correctly recorded. More than two-thirds of the longhand records and six-sevenths of the phonetician's records were incorrectly taken or transcribed. Thus the electric recording apparatus proved itself to be distinctly superior to court reporters, shorthand reporters, longhand reporters, and phoneticians.

<sup>3</sup> Betts, Emmett Albert, "An Experimental Appraisal of Certain Techniques for the Study of Oral Composition." Unpublished doctor's dissertation, University of Iowa, June 1931.

c. When compared with these four techniques, electric recording has the following specific advantages:

(1) The record may be proof read in situations in which a high degree of recording accuracy is demanded in the report.

(2) The physical presence of the reporter in the room is eliminated. The microphone or microphones may be hidden if the situation requires it. Incidentally, children up to the fourth or fifth grade are not very sensitive to the microphone. At least, they apparently are not disturbed as adults are by its presence.

(3) The rate of production of speech sounds may be determined quite easily.

(4) A more nearly accurate and complete record of the oral language activities may be assured. Non-verbal language sounds, such as "um . . uh," etc., are accurately recorded and readily identified.

(5) Since the meaning of oral language is determined, in part, by the voice inflection, the electric recording is a valuable supplement to the written transcript.

d. Experience with this language-recording apparatus leads to the conclusion that it has opened up a great many possibilities for curricular investigation in this field. In fact, the possibilities of application of the equipment seem to be limited mainly by one's imagination. It is quite probable that the results obtained by this method of recording may bring about rather complete revisions in the language curriculum. Certainly, it will provide the basis for placing the emphasis on the constructive side of language, rather than giving the heavy weighting to the error aspects which is the natural result of studies based on incomplete samplings of pupil records. It will permit the use of the so-called "error quotient" in oral language, since this apparatus will allow the investigator to get a complete and accurate as well as continuous record of the language activities of each individual child

over a long period of time. Such records should provide some very interesting data on the things children of these ages talk about, the complexity of the sentences used, the extent and type of vocabulary, the actual language usage, as well as other pictures of basic oral language skills.

*B. A Criterion for the Course of Study in the Mechanics of Written Composition<sup>4</sup>*

Curriculum construction in the mother tongue encounters many difficult problems among which the lack of an adequate criterion for the selection of the important usages and the absence of real standards of practice are basic. This is a report of a series of studies attempting to set up and define a criterion for the curriculum in elementary English, and to apply it to the problem of building certain instructional units in one limited phase of language activity—the mechanics of written composition.

1. The material here described deals somewhat exclusively with certain punctuation and capitalization practices. It is intended to accomplish three major purposes: a. to permit an objective evaluation of the importance of certain of the mechanical skills in written language; b. to provide a more objective basis for the establishment of ultimate authoritative standards of practice in these mechanical skills; c. to provide a complete and accurate check-list for use in the analysis of pupil and adult usages in these skills.

2. The need for the statement of defensible criteria for the inclusion of instructional items in the curriculum and for the establishment of adequate standards of practice in the use of these items is appar-

<sup>4</sup> Greene, Harry Andrew, "A Criterion for the Course of Study in the Mechanics of Written Composition," University of Iowa, Studies in Education, Vol. VIII, No. 4, March 1, 1933.

While the method and the sources of this criterion were suggested by the present writer, much of the credit for whatever merit this study may have should go to those graduate students who did the time-consuming and burdensome checking and re-checking of the sources which accuracy required. The detailed checking of the data on capitalization was done by Miss Florence Prehm, who submitted the project as a master's thesis. The data on punctuation were first checked by Mr. W. L. Rhea, and later re-checked by the writer and Dr. E. A. Betts, Dr. Paul K. Cesander, and Mr. O. R. Bontrager, graduate students who have been working on research problems in the field of elementary language during the past four years.

ent to anyone who has attempted to face in any practical way the problems of curriculum construction. The recognition of this need has found its best and most useful expression in the social utility point of view in the selection and evaluation of subject matter. This point of view holds generally that an analysis of social usages and activities must determine the emphasis and content of the curriculum. It is significant to note, however, that the field of elementary English does not lend itself well to this method of investigation. If social usage is to constitute the major basis for the curriculum it must mean that in the long run the analysis of adult activities will reveal a picture of the present status of these activities. In the event that the field is one over which adults generally have insufficient control, as is true in the case of language, the resulting curriculum will be inadequate. It seems quite obvious that if the curriculum is to function properly it must look beyond present limited abilities, careless and indifferent attitudes, and vague ideals, for the basic units of the course of study.

There is a rather definite basis for the opinion among investigators in the field of elementary English that an analysis of social usages, therefore, may not be taken as a suitable basis for the curriculum in this subject. The major reasons for this position are that many adults are distinctly limited in their abilities to use the skills essential to good speaking and writing, and furthermore, many adults do not know what correct usages and practices are. It becomes quite apparent, therefore, that elementary English is one field in which there are distinct limitations to the application of the social utility theory of curriculum construction. Clearly some other type of reasonably objective criterion must be set up.

3. Prior to the attempt to establish this criterion for the course of study in written composition the following specific standards, which must be met by the criterion itself, were set up:

a. This criterion must be defensible in terms of social utility in its broader

aspects. That is to say, the specific units of instructional material incorporated in the course of study as a result of the application of this point of view must have the sanction of social usage.

b. The resultant instructional units must be truly representative of best practice. This standard in itself implies the acceptance of a criterion sufficiently rigid to eliminate all faulty or highly debatable practices regardless of their social frequency.

c. The criterion must be reasonably specific and objective. It must be based upon such definite material that any one can check the material upon which it is based and come out with the same results as those reported here.

d. It must set up standards of practice in definite form.

e. It must afford a basis for the evaluation of the relative importance of these instructional items.

4. A careful survey of these standards leads one to the conclusion that there is after all approximately only one source to which we may turn for such a criterion. For such ultimate standards in the tool skills in English we are forced to turn to individuals who are spending a majority of their time and effort in the actual application of the practices involved. For such specific guidance in determining what capitalization and punctuation skills constitute desirable ultimate goals one would naturally turn to the editorial departments of large publishing houses. The authors of textbooks in English themselves appear to be far from agreement with respect to these basic practices. One is almost forced to the conclusion that if the editorial departments of great publishing houses do not know what practices are desirable it is doubtful if any one does.

The specific approach to the collection of the material for these ultimate standards was made by requesting 26 well known publishing houses to furnish the names of any guides or manuals of style used in their editorial departments. Replies were received from 25 companies

stating that they were using their own handbooks or naming the book or books used as their criterion. From this list after duplications were eliminated seven manuals of style were selected as best representing the guides used by these editorial departments.

The summary of this analysis reveals the general categories of capitalization and punctuation practices which are of major importance in terms of their frequency of mention in these seven handbooks. Such a summary affords a very clear-cut answer to the specific standards to be met by this criterion. Practices which are presented in these handbooks with high frequency undoubtedly represent material of distinct social and instructional utility. These same materials also must be truly representative of the best practices since they themselves are the guides followed by specialists in this field who, by virtue of their positions, are most likely to influence prevailing practice. The seven handbooks themselves afford an objective basis for the criterion. The relative frequencies with which specific usages are mentioned afford a direct basis for the evaluation of the importance of the items.

### C. A Mechanical Analysis of Oral Compositions<sup>5</sup>

1. This phase of the local research program represents one of the most comprehensive of the recent attempts to subject oral composition to a critical analysis. Due to the fact that written compositions have been much more readily obtained than oral compositions, most of the language studies in the past have been made on written materials. In view of the significant social importance of oral language and in view of the further fact that there are recognizable differences between oral and written language, it is important that such a comprehensive study be made.

2. The experience of previous investigators in the field of oral language has not been particularly encouraging, especially when any attempt is made to go beyond a mere count of errors. The development

of the Iowa Oral Language Recording Machine has opened up real possibilities for the investigation of oral language. In contrast with the earlier attempts to secure shorthand and longhand transcriptions of oral language activities, this apparatus makes available a complete and continuous record of the entire oral language production. The rate of speech can be determined; pauses, hesitations, mispronunciations, and non-verbal utterances can be checked. It is proposed, therefore, in this investigation, to utilize this electric recording machine for the collection of a large sampling of oral compositions and to analyze these data mechanically through the use of the Hollerith mechanical sorter and tabulator. The proposed method of handling the data on tabulation machine cards will demonstrate the possibilities of this type of mechanical analysis.

3. In addition to this demonstration the major purposes of the investigation are:

- a. To reveal the extent to which analyses of written language have failed to furnish an adequate picture of the complexities of language;
- b. To point out the peculiarities of oral language;
- c. To show how control over sentence structure develops;
- d. To reveal reasons for the apparent inferiority of oral compositions;
- e. To procure an historical record of difficulties that pupils encounter in giving oral composition, and
- f. To secure further data on errors in oral language, paying special attention to the relation of errors to total use.

4. The study will be based on the intensive observation of the pupils in grades four, five, and six, of the University Elementary Schools. While it is true that this is a somewhat selected group, this should not seriously affect this study, for it is not the purpose of this analysis to set up grade standards. The compositions to be analyzed will consist of running discourse and will be of an extemporaneous nature. It is planned to use as much as possible the compositions that are given as part of the

<sup>5</sup> This study is projected for completion this year by Mr. Thomas Keith Goltry as his Doctor's dissertation at the University of Iowa.

regular work of these pupils. At any rate, an effort will be made to secure compositions which in general reflect the school life of the pupils rather than formal compositions given just for the sake of practice in oral language. The following types of activities will be used as the basis for the oral composition:

- a. Try-outs for speeches for an assembly;
- b. Reports of pupils on some social study or nature study topic;
- c. Book recommendations by pupils;
- d. Opening exercise talks by pupils;
- e. Reports on classwork done or projects planned by a class committee;
- f. Summaries of class and individual activities.

In addition to these types of language situations advantage will be taken of letter writing situations by having pupils dictate their letters, typed transcripts being returned to the pupils for later use and study. Lantern slides and motion picture films may also be used to stimulate other types of composition.

5. The present plans call for the collection of at least six oral compositions of different types from each of the pupils in these grades. This should furnish approximately 100,000 running words of oral composition for analysis.

a. The analysis of these compositions will concern itself chiefly with certain aspects of sentence structure. The following outline presents the major points which are to be studied:

- (1) Incorrect or questionable usage and poor English
  - (a) Grammatical errors and error quotients.
    - 1'. In use of verbs
    - 2'. In use of pronouns and nouns
    - 3'. In use of adjectives and adverbs
    - 4'. In use of prepositions and conjunctions
  - (b) Poor sentence structure
    - 1'. Overloadedness and disjointedness
    - 2'. Reference of pronouns

and modifiers.

- 3'. Arrangement of parts
- 4'. Parallel structure
- 5'. Point of view or consistency
- 6'. Omissions
- 7'. Repetitions or wordiness
- 8'. Errors of logic

- (2) The complexity of sentence structure
  - (a) Length of sentence or group of words
  - (b) Completeness of sentences
    - 1'. Complete sentences
    - 2'. Sentences containing elliptical constructions
    - 3'. Uncompleted sentences
    - 4'. False starts
    - 5'. Non-sentence structure
    - 6'. Sentences containing repeated words or change in wording
    - 7'. Run-on sentences
    - 8'. Jumbled groups of words
    - 9'. Sentences with words or phrases missing or incomprehensible
  - (c) Number of dependent and independent clauses
  - (d) Number of prepositional phrases
  - (e) Number of participial, gerundive, and infinitive phrases
  - (f) Number of simple, compound, and complex sentences
  - (g) Compound or parallel constructions other than independent clauses
  - (h) Number of contractions used.
- (3) Placement of adverbial modifiers (words, phrases, and clauses)
  - (a) Position of adverbial modifiers or verbs
    - 1'. Before or after single verb or verbal and number of intervening words
    - 2'. Before, after, or within verb phrases
      - a. If within, part of verb phrase preceding and following
      - b. If before, or after,

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- number of intervening words
- 3'. Part of sentence which precedes and part which follows the adverbial
- (b) Position of adverbs which modify adjectives or other adverbs
  - 1'. Before or after modified word
  - 2'. Number of intervening words

In part (1) - (a) the specific grammatical errors will be recorded. For most of these it will be possible to determine error quotients. For this purpose it will be necessary to make a detailed classification in order to prevent a specific type of error from appearing insignificant when compared with the total usage of the words involved. This classification will be made from a psychological rather than a grammatical point of view.

Placement of adverbial modifiers, (3) in the outline, is an attempt to secure an objective measure of pupil control over sentence structure. A number of the points in Section III are also designed to get at certain constructive aspects of language control. If, on any of these points in the analysis, improvement is found throughout the three grade levels, it will be an indication that the point in question is a valid measure of control over sentence

structure, and also that it is a phase of sentence structure which does improve through instruction or maturation.

6. One of the particular features of this investigation lies in the fact that it proposes to make use of mechanical tabulation equipment in making the analysis. Specially designed Hollerith cards will be prepared which will permit the coding and analysis of each sentence or group of words. These cards will be coded to permit the identification of the sentence as to the pupil who used it, the particular composition in which it was used, and the serial position of the sentences in the composition. Later the data on the cards will be analyzed and classified in accordance with a prepared coding scheme. This method not only will permit an almost infinite number of types of classification, but will make it easy to secure exact illustrations of any category by the use of the sorting machine itself.

Curme's COLLEGE ENGLISH GRAMMAR and Curme's SYNTAX will be used as the standard for terminology. Webster's NEW INTERNATIONAL DICTIONARY will be used as the authority in the classification of words.

This rather complete and detailed outline of the analysis to be used in this study is given here since this study is representative of a number of such projected investigations at various grade and maturity levels.

## Section II. *The Philosophical Background of Language*

NO definite research program in the philosophy of language is suggested in this outline. Thus far the tendency of the writer has been to accept the social utility point of view in the placement of instructional *emphasis*. Furthermore, much excellent research data on the social demands of language are now available. Thus far three problems in this general

field have been suggested but have not been opened up for investigation locally. They are as follows:

- A. An analysis of social demands on written and oral language skills;
- B. Trends in social standards in language;
- C. A determination of the real functional centers of expression.

# Some Aspects of Growth in Written Expression

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**L**ANGUAGE ability is manifestly capable of extensive development. The babe, a few months of age, who utters a vaguely articulate monosyllable, "Uh! Uh! Uh!" meaning a pretty clearly defined demand, "Lift me up," may in the course of an equal number of years gain a practical command of all parts of speech, a vocabulary of several thousand words, and an ability to form sentences of great variety and quite mature complexity.

Many of the studies of language development have been devoted to consideration of the earlier stages, particularly the beginnings and early use of oral speech. These studies have shown such a marked development during the earlier years of childhood and such a definite retardation of the rate of development within a few years after the beginning of speech that later aspects of development have been largely ignored. Indeed, some writers have been led to the conclusion that there are no later stages of development. Stern,<sup>1</sup> for example, suggests that by the age of four or five the child's language development is "mainly finished." Boyd is even more positive than Stern that approximate maturity in language is reached at an early age. He declares that, except for a greater proportion of principal clauses, and of verbs, the eight-year-old's speech is almost that of an adult.<sup>2</sup>

It is the purpose of this article to show that there is significant development in one important aspect of the written expression of elementary school children, namely, in gross elements of sentence structure. The study<sup>3</sup> from which the data here used are

drawn involved the detailed analysis of 15,612 sentences written on seven different topics by 386 children in grades three, four, five, and six of a public school.

In the analysis of sentence structure all sentences were classified as simple, complex, compound, or complex-compound. The proportions of each type used are presented in Table I.

TABLE I  
Percentage of Each Type of Sentence in the Total Number of Sentences Written in Each of  
Grades 3, 4, 5, and 6

Type of Sentence	Sex	III	IV	V	VI
Simple	Boys	53.9	50.3	48.8	46.2
	Girls	56.9	48.4	44.9	40.2
Complex	Boys	29.2	31.3	32.7	34.5
	Girls	27.6	34.6	36.2	38.3
Compound	Boys	10.5	9.6	9.5	9.0
	Girls	9.8	9.1	9.7	10.1
Complex-Compound	Boys	6.5	8.8	9.0	10.4
	Girls	5.7	7.9	9.2	11.3

Although the difference in the percentages of sentences written in any two successive grades is small, the trend indicated is entirely consistent for all types but compound. The proportion of simple sentences decreases with advance in school grade. The proportions of complex and complex-compound sentences increase with the advance of the grade of the writers.

From the evidence presented it seems clear enough that children tend to organize an increasing proportion of their ideas into complex forms of expression as they progress through the grades of the elementary school.

Data concerning the relative frequency of use of different types of subordinate clauses are presented in Table II.

1 William Stern, *Psychology of Early Childhood*, pp. 139-178. New York: Henry Holt and Co., 1924.

2 William Boyd, "The Development of Sentence Structure in Childhood," *The British Journal of Psychology*, XVIII (January, 1927), 190-191.

3 William C. Hoppes, "The Development of Written Expression among Children of Elementary-School Grades." Unpublished Doctor's Dissertation, Department of Education, University of Chicago, 1931.

TABLE II

Percentage of Each Type of Subordinate Clause in the Total Number of Sentences Written in Each of Grades 3, 4, 5, and 6

Type of Clause	Sex	III	IV	V	VI
Noun	Boys	13.0	13.7	14.2	19.6
	Girls	14.8	16.2	21.6	26.6
Adjective	Boys	5.8	8.9	9.6	9.8
	Girls	5.5	8.7	9.7	10.7
Adverbial	Boys	31.1	34.7	32.1	33.8
	Girls	23.6	32.0	32.6	35.4

The proportions of noun and adjective clauses in the total number of sentences written increase consistently in each grade over the percentages of the next lower grade. No consistent trend in the use of adverbial clauses is revealed, although it is probable that a tabulation of eight or ten times as many sentences as were used might show significant development in the use of certain types of adverbial clauses, such as clauses of purpose, concession, and possibly others.

Further evidence concerning development in the use of independent and subordinate relationships among ideas in written expression is presented in Table III.

TABLE III

Ratios Between the Number of Coördinate Clauses and the Number of Subordinate Clauses Written by Boys and Girls in Each of Grades 3, 4, 5, and 6 and by Men and Women

Sex of Writers	III	IV	V	VI	Adults
Male	.74	.71	.72	.67	.43
Female	.76	.66	.64	.63	.48

The figures in the table express the ratio between the number of coördinate clauses used by a given group of writers and the number of subordinate clauses used by the same writers. The third grade children use three-fourths as many coördinate clauses as the number of subordinate clauses. The evidence in the table exhibited above clearly indicates an increase from grade to grade in the relative frequency of use of coördinate clauses. Above the third grade, girls appear to be superior to boys. The ratios for adults show that the men and women whose letters were analyzed use only about four tenths as many coördinate clauses as the number of subordinate.

Evidence concerning the development of sentence sense was sought in four types of data defined and illustrated below:

1. *Run-on sentences*, those containing three or more clauses introduced by *and*.

Last week I went on the farm and I saw pigs, cows, and ponies, and I rode the pony all around the farm yard and I came back and laid down and I fell asleep and I worked and it was dark. (Entire composition)—Girl, 4-B

2. *Dangling phrases*, or non-sentence groups of words.

If you are sick and the doctor said you should not eat any candy.—Boy, 6-B

3. *Incorrect designation of a clause as an independent sentence*.

I think everyone should learn to swim. Because if they were on a rowboat and if it should sink. What would they do?—Boy, 4-A

4. *Omission of conventional signs designating the end of one sentence and the beginning of the next*.

Last summer we were going to my aunt's on the way there the car went on two wheels we were all afraid but no one got hurt so we went on coming back we went slow we had a very nice time I hope we will go back next summer too. (Entire composition)—Girl, 5-A

Table IV presents the percentage of occurrence in the total number of sentences of each type of faulty sentence sense.

TABLE IV

Percentage of Each Type of Construction Indicating Faulty Sentence Sense in the Total Number of Sentences

Type of Construction	Sex	III	IV	V	VI
Run-on	Boys	1.7	2.4	1.2	.5
	Girls	.9	1.1	.3	.3
Dangling	Boys	1.8	1.1	1.9	1.9
	Phrase	1.4	1.3	1.6	1.0
Incorrect					
Designation of Sentence	Boys	1.3	2.1	1.6	1.0
Phrase	Girls	1.4	1.3	1.3	1.5
Omission of					
Period and Capital Letter	Boys	14.1	22.8	24.3	18.1
	Girls	15.5	14.6	18.7	13.0

It appears that the loosely organized run-on sentence decreases markedly in frequency of occurrence after the fourth grade. The run-on sentence may, therefore, be regarded as a mark of the very immature writer. There appears to be no appreciable

difference in the proportion of dangling phrases used in the different grades either by boys or by girls. The same is true of the frequency of use of clauses or phrases designated as independent sentences.

In all of the three types of failure to designate sentences properly, the frequency of occurrence is very decidedly less than in the omission of proper punctuation and capitalization. Indeed, the frequencies of the three types combined do not in any grade equal one-fourth the frequency of the fourth type. This striking disparity is significant in view of the fact that the fourth type of error is not failure to conceive and express entirely adequate and proper sentences from the standpoint of content and meaning, but only failure to use the conventional signs required to designate to the reader the end of one sentence and the beginning of the next. The child's error, or rather his lack of learning, in designating the beginning and end of his sentences, is not a lack of misapprehension of meaning, not a confusion of ideas or lack of order in the organization of ideas, not a lack of clarity and precision in the expression of his thought. The substance of the thought and the essential language forms in which the thought is expressed quite evidently have been more fully matured through the experience of oral speech than has the use of conventional signs such as periods and capital letters which only incidentally and indirectly contribute to precision in written expression.

In addition to the items already presented, certain other data, somewhat less well adapted to statistical analysis, were collected. For example, among the compositions studied there occasionally appeared two or more repetitions of some particular form of expression. All cases in which some form of expression was used in three consecutive sentences were copied and classified. The following examples will serve to illustrate persistence of sentence form.

## I

I like to ride on a horse a very lot.  
it is a lot of fun.

I like to ride in an airplane to.  
it is a lot of fun to,  
I like to ride on a steam boat to,  
it is a lot of fun to.

—Boy, 3-B

## II

Carrots and candy are good for the health.  
true  
Carrots are better than candy.  
Carrots have iron in them.  
Carrots make your body strong and healthy.  
false  
Well you have to have a little candy.  
Well candy has sugar and a little sugar don't  
hurt.  
Well your body has to have sweet things too.

—Girl, 6-A

Fifty-three per cent of all examples of persistence of form were found in the writing of third grade pupils. This fact strongly suggests that persistence of form is peculiar to the expression of the very immature writer. The suggestion is further corroborated by the fact that an additional 23 per cent of the occurrences of persistence of form were found in the fourth grade. These percentages gain further significance from the fact that only 19.6 per cent of the total number of sentences were written in the third grade.

Evidence concerning another aspect of sentence structure was secured from sentences involving inverted order of subject and predicate. Typical examples from children's writing are the following:

And in came Dad from work.—Girl, 4-A  
I got in and away went the calf.—Girl, 6-A

In more than 2400 compositions, 50 per cent of all cases of inverted order, not including slang, were found in the writing of sixth grade children. An additional 21 per cent were found in the sentences written by children of the fifth grade. Whereas persistence of form is peculiar to immature writing, the use of inverted order of subject and predicate is similarly peculiar to the greater maturity of written expression represented by the sixth grade. The contrast in facility and efficiency of thinking may be inferred from examining typical examples of the two types of evidence.

## I

I like to skate in summer.  
 I can play tennis.  
 I can play football.  
 I can play baseball in summer.

## II

I could not go to school, nor could I run and play like other children.

The first example betrays inhibition, dependence upon the repetition of simple words, and an uncritical acceptance of a conspicuously monotonous form. The second example with equal clarity reveals fluency of thought, refinement in conception, and flexibility in choice and arrangement of words which enriches meaning by varying the emphasis.

For further evidence concerning growth in refinement of expression certain types of verbal constructions were selected. Two or three examples will make concrete the verbal constructions typical of children's writing:

We saw a big monkey teaching a baby monkey to do some tricks.

The advocates of low license favored a small fee, levied for revenue only.

My mother having missed me started to look for me.

They also test the milk before delivering it to us.

Of the 277 examples of the use of verbal phrases, 67.9 per cent were found in the writing of fifth and sixth grade pupils, and 48.4 per cent in the sixth grade. Whereas the number of sentences written by sixth grade pupils was approximately 50 per cent greater than the number writ-

ten in the third grade, the increase in the frequency of occurrence of certain verbal phrases was 400 to 1000 per cent. Marked growth between third and sixth grade in the use of verbal phrases is evident particularly in those types which may be regarded as substitutes for complete propositions.

The evidence submitted in preceding paragraphs is perhaps sufficient to show that there is a distinct development between the third and sixth grades in the use of varied and refined constructions. These various evidences of development in forms of expression may be regarded also as evidences of developing mental life. Elaboration and refinement in sentence structure signifies growth in the characteristic patterns of the organization of thought.

Since substantially all thinking of the highest order and of greatest individual and social worth is done in verbal symbols and in organization corresponding closely to forms of verbal expression, the intimate inter-relation of thought and language can scarcely be over-emphasized. The formulation of the instructional program in language must be done with full respect and appreciation for this close relationship. Although the present article is brief and somewhat narrowly limited in scope, it may suggest the type of analysis which will have to be made on an extended scale before a psychologically determined course of instruction in language will be possible.

(To be continued)

# Eighteenth Century Ghosts in Twentieth Century Text Books

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A GREAT deal of attention has been paid in recent years to the improvement of textbooks for school use, and nowhere is this improvement more evident than in the books designed for English language and composition instruction. The formal and formidable grammar books of a few decades ago have been in recent years entirely replaced by bright, attractive volumes, well-printed, well-organized, and well-illustrated. With this improvement in the appearance of our books I find a corresponding advance in the teaching devices and techniques entirely in harmony with the enormous advances we have made in the science and art of teaching. Unfortunately, however, we have too often been content with attractive books and clever devices to the neglect of the basic theories and specific subject-matter which go into them. I feel an unhappy suspicion that the improvement in our textbooks is more superficial than a first glance would indicate. If I may invent a modern figure, I might say that we have been building radio cabinets for Swiss music boxes, overlooking the fact that no matter how beautiful the cabinets they can produce nothing but the old tinkling tunes.

Shifting my figure now to the promise of my title, I may describe our current textbooks as stately mansions of modern design, pleasant to look at and comfortable to live in, but haunted with the ghosts of the past. Like all ghosts, these ghosts of the English tradition are retiring and hard to get at; their presence is often unsuspected, but they are there, nevertheless, haunting the halls and recesses of our mansions, and exerting, though unseen and

often unfelt, a subtle and pervasive influence upon those who frequent these mansions. Like all ghosts they are potent in the dark but shrink and fade with the light; undetected they work their influence unchecked; seen, recognized, and subjected to the powerful light of analysis and criticism they tremble, turn, and fly to the place where good ghosts should be. I ask you to follow with me now on a short but vigorous ghost-hunt.

The first ghost we must find and exorcise is the ghost of literary infallibility. He has a long and famous ancestry. He points back with pride to Ben Jonson's defence of him in *TIMBER*, where he said, "I call that good usage, which is commonly accepted of learned men." He chuckles with glee at the remembrance of Dean Swift's proposal in 1712 for the establishment of an English academy for the purpose of "Correcting, Improving and Ascertaining the English Tongue." The whole eighteenth century fills him with joy for it was in this time that the verbal and syntactical freedom of English was so greatly curbed by the growth of a literary canon, expressed in various ways by various men, but all derived from the general theory commonly agreed upon that the standard of English usage for all purposes is the standard of books, and that good English is literary English. Even George Campbell's canon of usage, announced in 1776, that good usage is "present, national, and reputable" was so restricted by modifications of these terms that "present" and "national" were forgotten, and "reputable" became almost the exclusive consideration—"reputable" meaning of course the English of acknowledged authors, the standard of books.

Our ghost looks with satisfaction on

\* Read before the Elementary Section of The National Council of Teachers of English, November 26, 1932.

the teaching of grammar in the nineteenth century; that period in which to the making of books there was no end, when book copied book and rule copied rule. The grammar of Bishop Lowth, that eighteenth-century clergyman, scholar, and defender of the literary tradition, was copied almost verbatim by Lindley Murray, who sold over a million copies of his grammar in the United States and was copied in turn by a host of followers who sold several millions more of their respective duplications well into the latter part of the nineteenth century. Our ghost recalls the two arch-priests of the bookish tradition in the nineteenth century, Goold Brown, who in his massive *GRAMMAR OF ENGLISH GRAMMARS* said, "The grammarian is the authority of authors and the teacher of teachers," and Richard Grant White, who in 1870 declared, "Usage is not the absolute law of language. There is a misuse of words which can be justified by no authority, however great, by no usage, however general."

This tradition of literary infallibility, founded on the natural reaction against Elizabethan verbal enthusiasm, expanded and strengthened in the philosophic formalism of the eighteenth century, and firmly planted in the schools through nineteenth-century grammar instruction, still haunts our books, despite the modern exteriors we have constructed for them. You will find it in the books on your desks, in those still damp from the presses, in the ever-recurring phrase, "Good English is the usage of the best writers and speakers." The word "speakers" in this definition is a mere verbal concession. The English of speakers is not studied; it is forgotten as soon as it is uttered unless it is written down for posterity to read, when it is edited in accordance with the literary tradition. It is evident, therefore, that our standard of usage in our modern, well-made textbooks is still that of the eighteenth century, namely, that good English is the English of books.

To rid us of this ghost we must throw upon him the full light of linguistic science. He cannot survive the flood of

truth in the axioms that language is the product of a people, that the people make and change a language; that the spoken language of today is the only basis for the determination of good usage; that the language of books is an artistic refinement of "the language" expressly designed and artificially rarified for literary purposes, but is not the language of communication. With the acceptance of these axioms of language in our text books, in practical application as well as in theory, the ghost of literary infallibility will disappear to be seen no more.

The second ghost we must meet and vanquish is a delicate counterpart of the first. He is the ghost of aristocratic nicety. Minute refinement in language, which we sometimes mistakenly call accuracy, is, in fact, nothing more than the specific representation of an aristocratic ideal. It is a class residuum, the accumulated dicta of a superior minority. It is always dragging behind, always retaining the old because it is old, always spurning the new because it is new. It is snobbish, self-sufficient, and reactionary. It says, with supreme arrogance, "What I say is correct; what I avoid is incorrect." This ghost haunts our books in the form of minute distinctions in speech and writing which are observed by few but writers of textbooks (and I must add, not always by them) and well-meaning persons who in the effort to be correct succeed in becoming priggish. Who among us, in speech at least, observes the distinction between *arriving in* a great city, and *at* a small town? Who invariably preserves a distinction between *farther* and *further*, *each other* and *one another*, who never uses the word *above* as an adjective, nor says *try and do it*, nor ever splits an infinitive? These are but a few of the minutiae of snobbish distinction to be found in our current textbooks.

We must meet this ghost with a clear recognition of our task as teachers of English. We are employed servants of a democratic commonwealth hired to teach the children of that commonwealth a practical and effective use of their own lan-

guage. In such a task there is no room for aristocratic nicety. We as individuals may cherish, practice, and preserve any or all of the minute refinements of English we desire, but to enforce them as standards of correctness in the classroom of the public schools is a violation of our contract with the commonwealth. It is our job to teach children to communicate with one another in a clear, decent, and unself-conscious manner, and to leave the artificial niceties of a class dialect out of the classroom standards.

There are still two more ghosts to be met and dealt with: the ghost of moral obligation and the ghost of grammatical rectitude. The former of the two is but a faint shade, elusive and furtive, but is still lurking in dark corners. He is the shade of English that ought to be, the faint remnant of the vigorous spirit of "thou must" that ruled the eighteenth century. He has a champion today in a book by Ambrose Bierce called *WRITE IT RIGHT*, a widely advertised and widely sold handbook of misinformation about English. His followers are all those who feel a moral obligation toward the preservation of English as it was, who are divinely inspired St. Georges put into a weak and vacillating world for the specific purpose of slaying the dragons of change in language. One such champion of what ought to be says, in a recent article pleading for the resuscitation of the fast-sinking subjunctive mood of modern English, "Both its own inherent merits and the dictates of a worthy patriotism demand for it a fairer treatment than that which it receives from many English grammarians." We are called upon to rise up and do something about a disappearing language form on the grounds of its "inherent merits" and "the dictates of a worthy patriotism!" Surely our ghost chuckled when he read that.

The last ghost to vanquish in our round of ghost-hunting is the ghost of grammatical rectitude. Perhaps I have named him badly, but he is the shade who takes for his motto the phrase found again and

again in our current textbooks, "The purpose of grammar is to teach correctness in writing and speaking." This is a vigorous ghost, almost a corporeal body, so strongly is he entrenched in our textbooks. Yet he represents an obvious fallacy. Grammar is a science, the accumulated and organized facts about a language. English grammar is nothing more than the accumulated facts about English. It is the product of observation, analyzed and organized. Questions of right or wrong are not facts but judgments. Grammar, I repeat, is concerned with the facts and not with the judgments. Astronomy is not the science of directing the stars, nor is botany the science of beauty in flowers. Similarly grammar is not the science of what is right or wrong in language, but simply the science of language as it is. Grammar has no more right to dictate language usage than has psychology to dictate table manners. Both are sciences of human behavior; both are exempt from the passing of judgments. This is no new idea. As early as 1879 W. D. Whitney wrote, "That the leading object of the study of English grammar is to teach the correct use of English is, in my view, an error, and one which is giving way to the sounder opinion that grammar is the reflective study of language." This statement by one of America's most scholarly grammarians should have been a severe blow to our ghost, but such was not the case, as a glance at the preface of any current composition book will verify. On the contrary, our ghost has been greatly fortified by a recent movement which has swung all of our pedagogical batteries into a broadside for correctness. About fifteen years ago we relinquished our activities in grammatical analysis; rules went out, parsing faded, and diagraming became but a shadow of its former glory. Reluctantly withdrawn from these classroom pursuits, we turned with full vigor to a new game, error-chasing. I need not remind you of the last ten years of error studies, error charts, error programs, courses of study based on errors, books written on errors, and the accompanying campaign-cry

# The Written and Spoken Vocabularies of Children

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NUMEROUS investigations of children's vocabularies have been prompted by the necessity of discovering what words should be taught in spelling. For this reason most word studies have been in the field of writing vocabularies. In spite of some limitations in many of the studies, the results have furnished an impetus to overcoming inefficiencies in the teaching of spelling.

At least four types of vocabularies can be attributed to each individual, namely, hearing, reading, writing, and speaking. The range of each vocabulary may be very different. It is a well known fact that the hearing and reading vocabularies of any normal person far exceed the range of both writing and speaking vocabularies. Likewise, the speaking vocabulary has a wider range than the writing vocabulary. One explanation offered is that writing is a more recently acquired tool of communication and it takes longer to perfect it.

It is entirely possible and comparatively easy to exhaust the writing vocabulary of an upper grade child and thus secure an inventory of his spelling needs. In the lower grades, however, it is more difficult to determine the extent of a child's needs in spelling. It is very probable that a younger child is limited in his choice of written words by an inadequate command of the tool of writing as well as inability to spell.

Thus it is that many questions arise concerning exhaustion of vocabularies to discover spelling needs. Would the removal of writing and spelling difficulties tend to remove great differences in the ranges of the spoken and written vocabularies? If so, isn't it possible that the spoken vocabulary is a better measure of a child's vocabulary? Are there certain types

of words which are found in the spoken vocabulary of children but not in their writing? If so, is there some reason for their occurrence in the written vocabulary only? This study is an attempt to throw some light on these questions.

In considering the data for this investigation it was decided to take the three best known studies of the vocabularies of children's themes, the Jones<sup>1</sup>, Bauer<sup>2</sup>, and Tidyman<sup>3</sup> lists, as the most authentic representation of the written vocabulary of children. These data were combined in an effort to make a more representative list.

It is now generally conceded that geographical location does not affect the basic vocabulary, yet it may be of interest to note that in combining the data of the three lists this possibility was overcome. The Tidyman list represents the written vocabulary of children in the public schools of the state of Connecticut, the Bauer list represents the written vocabulary of New Orleans public school children, and the Jones list represents the vocabulary of children's themes secured from Illinois, Maryland, Iowa, and South Dakota. Thus, it may be seen that all sections of the country, with the exception of the far west, are represented.

Mrs. Ernest Horn's<sup>4</sup> study of the vocabulary of kindergarten children was used as the most representative spoken vocabulary list. It was not considered necessary to supplement this thorough study with any other data. Mrs. Horn's

<sup>1</sup> Jones, W. F., *Concrete Investigation of the Materials of English Spelling*. University of South Dakota, Vermillion, 1913.

<sup>2</sup> Bauer, Nicholas, *The New Orleans Public School Spelling List*. F. F. Hansell & Bro., Ltd., New Orleans, 1916.

<sup>3</sup> Tidyman, W. F., *Survey of the Writing Vocabularies of Public School Children in Connecticut*. Government Printing Office, Washington, D. C. 1921.

<sup>4</sup> Horn, Mrs. Ernest, "Kindergarten Vocabulary." Unpublished

kindergarten list is the most extensive list of the spoken vocabulary of children. Stenographic reports were taken of lessons and of children's conversation during free periods in the kindergarten. A composite list of words of published vocabularies of children and reports of the vocabulary used in nursery schools were also included. Later some data furnished by showing pictures in the Sears, Roebuck and Company and Montgomery Ward and Company catalogs were added to the above. The primary purpose of this study was to compare the written and spoken vocabularies of children as to range, extent of overlap, and the type of words in the overlap.

In working with the data furnished by the theme lists it was possible to evaluate the lists from the standpoint of the methods used and the agreement of results with other similar studies. Since this comparison is essentially concerned with words used by children of kindergarten and primary age, only words of lowest grade placement in each of the theme studies were used. These were compared with words of a frequency of at least five in Mrs. Horn's kindergarten spoken vocabulary list. A composite of all words in the written and spoken vocabulary was made. Each word was checked as to occurrence in the studies used. This plan included the following number of words from each theme list.

Bauer—492 (including derivatives)  
 Jones—1927 (not including derivatives)  
 Tidyman—1103 (not including derivatives)

Before drawing any conclusions, two analytical word lists were made.

The first consisted of the 1724 words which were found only in the spoken vocabulary of young children. This list was later analyzed into type words. Of these words, 1021 did not occur even in the upper grades of any of the theme lists.

The 542 words which were found only in the written vocabulary of young children formed the second analytical word list. Of this list some occurred in the

spoken vocabulary with a frequency of less than five. However, 209 words were totally absent. These were distributed in the theme list as follows:

In all three lists	4
Bauer and Tidyman Lists in common	0
Jones and Tidyman lists in common	32
Bauer, Jones lists in common	13
Tidyman list only	66
Jones list only	38
Bauer list only	56

*A Study of the Two Analytical Word Lists*

I. The spoken vocabulary of kindergarten children is very much larger than the written vocabulary. The following explanations are evident:

A. In the kindergarten investigation the stimulus furnished by a large variety of situations tends to exhaust the vocabulary more thoroughly. Since theme topics were not assigned in the Tidyman study, the vocabularies may not have been exhausted. In the Jones study, an attempt was made to exhaust the vocabularies by stimulating discussions and by the choice of a variety of subjects by teachers, but it seems that important types of child experience have not been included. There is no other explanation for the exclusion of words like bacon, baseball, busy, dance, drawer, furnace and hairpin.

B. The handicaps of writing and spelling undoubtedly limit the use of words in the written vocabulary. Spontaneity of expression is suppressed by the necessity of going through the more laborious process of writing.

C. Rules of good English exclude some words from themes which are used freely in speaking.

D. In speaking, some words come up in very informal and intimate situations which cannot be expected to arise in writing.

II. The list of words found in the spoken vocabulary would have been considerably lengthened had words of a frequency of less than five been included. A very large part of the total kindergarten

list was excluded from consideration in leaving out these words of low frequency.

III. Certain characteristics are noted in the words which are found outside the field of overlap in the spoken vocabulary. Some of these are a result of the child's environment and others of childish habits which are often encouraged by parents. The following types of words were classified:

- A. Words referring to household articles, furniture and the home.
- B. Words referring to foods and eating.
- C. Words which have become common recently because of new inventions and pursuits.
- D. Words referring to wearing apparel and dressing.
- E. Words referring to nature.
- F. Words connected with games and play.
- G. Childish slang words.
- H. Contractions.
- I. Words of newly acquired meanings, often questionable in good usage.
- J. Exclamatory words.
- K. Possessives.

IV. There are some words in the kindergarten spoken vocabulary which are of high frequency, yet do not get into the theme vocabulary of even the upper grade children in the theme lists. After excluding the type words mentioned above, more than two hundred such words were found. This may be due in part to in-exhaustion of the written vocabularies in the theme studies, for no other reason is apparent. The investigations of Alta Wilmarth<sup>5</sup> and Grace McKee<sup>6</sup> indicate that assignment of stimulating theme topics produces a different range of vocabulary.

V. The following percentages indicate the extent to which the words placed in lowest grade of each of the theme lists occur in the kindergarten list with a frequency of five.

Bauer list	89.8 per cent
Tidyman list	94.0 per cent
Jones list	81.3 per cent

<sup>5</sup> Wilmarth, Alta, "Vocabulary of Rural Children's Themes." Iowa Thesis, 1926.

<sup>6</sup> McKee, Grace M., "Children's Themes as a Source of Spelling Vocabulary." Iowa Thesis, 1924.

VI. It was found that 1021 words found in the spoken vocabulary of kindergarten children with a frequency of five did not get into any grade of any of the theme lists. A check was made to see how many of these words are found in Dr. Ernest Horn's<sup>7</sup> BASIC VOCABULARY of 10,000 words used in writing. A total of 495 words or 46.2 per cent of the words was also found in the BASIC VOCABULARY. The following is a detailed list showing the distribution of these 495 words in the check with the 10,000 words:

Position of Words in 10,000 List	No. of Words Found in that Position
1-500	10
501-1000	22
1001-1500	22
1501-2001	25
2002-2501	32
2502-2994	19
2995-3500	25
3501-3997	21
3998-4495	19
4496-5001	30
5002-10,000	270
Total	495

This is conclusive proof that the theme lists are inadequate because they exclude words found in the spoken vocabulary of young children, words of high permanent value in writing.

VII. The second grade of the Bauer list of written vocabulary includes a larger percentage of words in the field of overlap with the spoken vocabulary of young children than the other two theme lists. Of the total of 551 words in the second grade, only 56 words are not found in the spoken vocabulary of kindergarten children. This shows that 89.8 per cent of the second grade words of the Bauer list are included in the kindergarten list with a frequency of at least five. Excluding (1) numbers, (2) plural nouns, and (3) comparative and superlative adjectives, only 2 per cent of these words are not found in the kindergarten spoken vocabulary with a frequency of five. Thus, if the three types mentioned

<sup>7</sup> Horn, Ernest, *Basic Vocabulary*. State University of Iowa Studies in Education.

above are left out, the overlap is 98 per cent.

VIII. In the Tidyman list of 1,103 words placed in the third grade, 6 per cent are not found in the spoken vocabulary of kindergarten children. These words may be classified as words used in the school room, words for which more common synonyms are substituted in the spoken vocabulary, and a few other miscellaneous words.

IX. Jones has placed 1927 words in the second grade. This large number is the result of placing a word in the lowest grade in which 2 per cent of the pupils use it. The tendency of this method of placement is to crowd words as far down in grade placement as possible. This helps to explain why 19.7 per cent of the words placed in the second grade are not found in the kindergarten list. The percentage is considerably higher than shown by either Bauer or Tidyman. This can be explained to some extent by noting that Jones' method of grade placement made it possible for three pupils to determine the placement of a word in the second grade.

X. The theme lists do not agree in the words outside the field of overlap of the spoken and written vocabularies. Of the 542 words that do not occur in the kindergarten list with a frequency of five, only four words are found in common in the lowest grade of the theme lists, 32 words in the Jones and Tidyman lists, 13 words in the Jones and Bauer lists, and none in the Bauer and Tidyman. Each of the 493 remaining words was found in one list only. This lack of agreement shows that there are no words in the written vocabulary of young children that are not also found in the spoken vocabulary, and indicates that the spoken vocabulary

may form a basis for spelling needs. Furthermore, some of the words found in the written but not in the spoken vocabulary would doubtless have occurred in the latter had a fuller count been made. It must be remembered that the kindergarten list resulted from a study of more than 700,000 words, and that in this investigation only words of a frequency of five or more were used.

The purpose of this study was to compare the written and spoken vocabularies of children. The exact nature of the differences has been shown as fully as was possible from the data available. The following deductions may be made from the conclusions:

1. The best known theme studies show lack of agreement as to the words included, grade placement of words and size of vocabulary.
2. The theme lists are not adequate measures of vocabulary in certain phases of experience. Assigned topics should have been used.
3. The Bauer list is more representative of words that fall into the field of overlap with the kindergarten study.
4. Nearly all words found in the written vocabulary occur also in the spoken vocabulary.
5. Common words of high frequency in the BASIC VOCABULARY of 10,000 words used in writing are not found in the theme lists but do occur in the spoken vocabulary.
6. Some type words arising in intimate situations and in the home are found in the spoken vocabulary only.
7. On the whole there are indications that the spoken vocabulary provides a better measure of the child's spelling needs than the best known theme studies.

## PRACTICE MATERIALS IN THIRD GRADE READERS

(Continued from page 58)

more rapidly if individual practice sheets are placed in the pupils' hands.

The report of the teacher using the practice materials indicates that the experimental method is advantageous from the standpoint of ease in planning the English work, keeping all pupils busy at the same time, and enabling pupils themselves to keep a definite check on their actual accomplishment in the English work. The pupils enjoyed the material because it gave

them something definite to do in English. These comments together with the objective measures of progress indicate that the methods and devices used in the experimental class were much superior in actual results to those which were used in the control class. Even with the factor of teacher ability out of control, the differences in favor of the method using the assignment and exercise sheets are large enough to be fairly conclusive.



## EIGHTEENTH CENTURY GHOSTS

(Continued from page 73)

"Grammar for correctness!" We are still, unfortunately, in the throes of this era of errors.

The only charm which will exorcise this powerful ghost is a reëvaluation of the purposes of our instruction. If we can perceive ourselves not as guardians of a tradition but as interpreters of a living present; not as error detectives but as

guides in the realms of creative expression; not as judges of right and wrong, but as observant scientists passing on to others the fruits of our observations; then the ghost of grammatical rectitude can be laid to rest, and we shall smile as tolerantly back upon these years of error-chasing as we now do upon the years of memorized rules and formal grammar.



## Editorial

### Scientific Scrutiny of the Sentence

THE increased attention to research on the sentence in elementary school composition bodes well for language instruction in the grades. In the past there was a tendency to follow procedures and set up courses of instruction entirely on the basis of tradition. Grammar, largely a matter of definition, played its role here, too, as C. H. Ward pointed out in his "Two Kinds of Grammar" (*THE ELEMENTARY ENGLISH REVIEW*, May, 1932.) In this number of *THE REVIEW*, three papers report research on the sentence in children's compositions. They are: "Form of Discourse and Sentence Structure," by J. C. Seegars, page 51, "Research in Elementary Language," by Harry A. Greene, page 59, and "Some Aspects of Growth in Written Expression," by William C. Hoppes, page 67.

Dr. Seegars raises a question concerning the use of the sentence as the basis of computation in papers written by grade school children. He contends that "this basis results in an entirely false conception or picture of the papers analyzed when those papers are written by children in the grades." His procedure is to compare "the number of dependent clauses with the number of independent clauses."

Dr. Seegars concludes from his study "that the form of discourse in which children write has a definite bearing upon their sentence structure." "One conducting a study," he says, "of written composition must consider the form of discourse in which that composition is written, as should the teacher who is grading a paper or assigning work." In view of the encrustation that in the past tended to fix teaching methods around the four forms of discourse, this conclusion has the ring

of an unfortunate throw-back. Dr. Seegars would hardly maintain that the composition course should be given an artificial organization around these forms of discourse, or that the teacher's procedure should objectify these forms too sharply.

Dr. Hoppes, in his findings, points out that "the intimate inter-relation of thought and language can scarcely be over-emphasized. The formulation of the instructional program in language must be done with full respect and appreciation of this close relationship." He declares that he has presented in the report a "type of analysis which will have to be made on an extended scale before a psychologically determined course of instruction in language will be possible." Any inference that the course of instruction in language may be determined solely on a psychological basis affords interesting speculation. For example, certain philosophical considerations would thereby seem to be eliminated with the consequence of unfortunate narrowness.

Attention is called to the fact that Dr. Greene's paper is in the nature of a report, to be continued through two forthcoming numbers of *THE REVIEW*. The concluding portion of the report will be accompanied by discussions by Dr. A. J. Ashbaugh, Dean of the School of Education, Miami University, Dr. Robert C. Pooley of the University of Wisconsin (whose article "Some Eighteenth Century Ghosts in Twentieth Century Text Books" appears in this issue), Dr. Dora V. Smith, University of Minnesota, Dr. Percival M. Symonds, Teachers College, Columbia University, and Dr. M. R. Trabue, University of Minnesota.

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